

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
 - TEXT CUT OFF AT TOP, BOTTOM OR SIDES
 - FADED TEXT
 - ILLEGIBLE TEXT
 - SKEWED/SLANTED IMAGES
 - COLORED PHOTOS
 - BLACK OR VERY BLACK AND WHITE DARK PHOTOS
 - GRAY SCALE DOCUMENTS
-

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

REMARKS

RESTRICTION REQUIREMENT

Applicant affirms the election of claims 1-16 and 21-30, i.e., the Group I claims.

STATUS OF APPLICATION

No claims have been canceled and no new claims have been added. Accordingly, claims 1-30 are pending in the present application. No new matter has been introduced by way of the present amendment.

DRAWINGS

The Office Action fails to indicate whether the original drawings are accepted by the Examiner. Such an indication is respectfully requested. To date, no Notice of Draftsperson's Patent Drawing Review has been received. Applicants respectfully request receipt of this document when it becomes available.

OBJECTIONS TO SPECIFICATION

The Office Action indicates that the Abstract of the Disclosure is objected to because, in line 1, the term "[t]he present invention discloses" is an implied term. The Abstract has been amended to overcome this rejection. Accordingly, it is respectfully requested that the objection to the Abstract of the Disclosure be reconsidered and withdrawn.

The Office Action further indicates that the disclosure is objected to because the sentence beginning with "[s]ome embodiments", on page 10, lines 1 and 2, is incomplete.

The specification has been amended to overcome this objection. Accordingly, it is respectfully requested that the objection to the disclosure be reconsidered and withdrawn.

35 USC § 102 REJECTIONS

Rejection of claims 1-13 and 21-30 over US 5,323,853

The rejection of claims 1-13 and 21-30 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,323,853 to Leismer *et al.* (hereinafter referred to as "the Leismer patent"), is respectfully traversed for the reasons set forth below.

Claim 1, as amended, recites:

*An apparatus, comprising:
a first member;
a second member releasably attached to the first member; and
a control line shear mechanism disposed proximate an interface
between the first member and the second member.*

Claim 1 is anticipated by the Leismer patent, "[o]nly if each and every element as set forth in the claim is found, either expressly or inherently described" in a single prior art reference."¹ Further, "[t]he identical invention must be shown in as complete detail as is contained in the...claim."² The Leismer patent, however, falls short of these requirements.

The Leismer patent discloses first shear member 90 and second shear member 92 for engaging and shearing the electrical line 30 when the first and second parts 12 and 14 are disconnected from each other.³ The shears 90, 92 are disposed well below the interface between the first part 12 and the second part 14, which is in the general area of

¹ See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

² See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

the fishing recess 62.⁴ Accordingly, the Leismer patent cannot anticipate the present invention, as set forth in claim 1, since the shears 90, 92 are not disposed proximate the interface between the first part 12 and the second part 14.

Further, the Leismer patent cannot render the present invention, as set forth in claim 1, obvious. To establish a *prima facie* case of obviousness, three basic criteria must be met⁵:

- (1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, rather than merely in Applicants' disclosure, to modify the reference or to combine reference teachings;
- (2) There must be a reasonable expectation for success found in the prior art, rather than in Applicants' disclosure; and
- (3) The prior art references must teach or suggest all the claim limitations.

The Leismer patent provides no suggestion or motivation for one skilled in the art of the invention to modify the Leismer patent such that the shears 90, 92 are proximate the interface between the first part 12 and the second part 14. Rather, the Leismer patent teaches away from such a configuration, as it discloses that "it is also desirable to part the electrical cable 30 at a position below the fishing recess 62."⁶ Thus, one skilled in the art of the invention would have been led away from a configuration as set forth in claim 1. Accordingly, the present invention, as set forth in claim 1, is allowable over the Leismer patent.

Since the Leismer patent teaches away from a configuration wherein the control line shear mechanism is disposed proximate the interface between the first member and

³ See column 4, lines 33-38, and Figures 1B and 7, of the Leismer patent.

⁴ See Figure 1B of the Leismer patent.

⁵ See MPEP 2143 and *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

the second member, the Leismer patent cannot provide any teaching that would result in one skilled in the art of the invention to have a reasonable expectation of success concerning such a configuration. Accordingly, the present invention, as set forth in claim 1, is allowable over the Leismer patent.

Further, the Leismer patent does not teach all the limitations of claim 1. As indicated *supra*, the Leismer patent does not teach or suggest or suggest a control line shear mechanism being disposed proximate the interface between the first member and the second member, as required by claim 1. Rather, it teaches away from such a configuration. Accordingly, the present invention, as set forth in claim 1, is allowable over the Leismer patent.

Claims 2-11 depend from claim 1. Accordingly, the remarks provided *supra* concerning claim 1 apply equally to claims 2-11.

Claim 12, as amended, requires a second tubular member releasably attached to a first tubular member and a control line shear mechanism that is disposed proximate an interface between the first member and the second member. As discussed *supra* concerning claim 1, the Leismer patent neither discloses nor suggests such a configuration. Accordingly, the present invention, as set forth in claim 12, is allowable over the Leismer patent.

Claim 13 requires first and second members defining a control line passageway that comprises a pair of shearing blades adapted to shear a control line during release. The Leismer patent does not disclose such a configuration. The Leismer patent discloses that "coacting shear means are provided on the first and second parts 12 and 14."⁷ Thus,

⁶ See column 4, lines 31-32, of the Leismer patent.

⁷ See column 4, lines 33-34, of the Leismer patent.

the first part 12 and the second part 14 do not define a control line passageway that comprises a pair of shearing blades adapted to shear a control line during release, as required by claim 1, as the shears 90, 92 are on, but not part of the first and second parts 12, 14. Accordingly, the Leismer patent does not anticipate the present invention as set forth in claim 13.

Further, the Leismer patent provides no suggestion or motivation to one skilled in the art of the invention that such a configuration would be preferable or even desirable to that found in the Leismer patent. Accordingly, the present invention, as set forth in claim 13, is allowable over the Leismer patent.

Claim 21 requires cutting a control line proximal to the point of separation of the first and second members before or during the separation step. As discussed *supra* concerning claim 1, the Leismer patent does not disclose or suggest cutting the electrical line 30 proximal to the point of separation between the first part 12 and the second part 14 (*i.e.*, near the fishing recess 62), but rather teaches that it is preferable to cut the electrical line 30 below the point of separation. Accordingly, the present invention, as set forth in claim 21, is allowable over the Leismer patent.

Claims 22-27 depend from claim 21. Accordingly, the comments provided *supra* concerning claim 21 apply equally to claims 22-27.

Claim 28, as amended, requires providing a tubular string comprising a safety sub, the safety sub having a point of separation and comprising a control line cutting mechanism disposed proximate the point of separation of the safety sub. As discussed *supra* concerning claim 1, the Leismer patent does not disclose or suggest cutting the electrical line 30 proximal to the point of separation between the first part 12 and the second part 14 (*i.e.*, near the fishing recess 62), but rather teaches that it is preferable to

cut the electrical line 30 below the point of separation. Accordingly, the present invention, as set forth in claim 28, is allowable over the Leismer patent.

Claims 29 and 30 depend from claim 28. Accordingly, the remarks provided *supra* concerning claim 28 apply equally to claims 29 and 30.

Regarding claims 6, 7, 26, and 27, the Office Action alleges that the Leismer patent teaches that the shears 90, 92 may be hydraulic or solenoid driven. Applicant respectfully traverses this allegation as being contrary to fact. The Leismer patent discloses that the release mechanism may be actuated by using a solenoid⁸ or by hydraulic actuation.⁹ Accordingly, claims 6, 7, 26, and 27 are allowable over the Leismer patent.

The Office Action further alleges that the Leismer patent teaches a release mechanism 26 comprises a shear element 58. Applicants respectfully traverse this allegation as being contrary to fact. Element number 58 of the Leismer patent is a hydraulic fluid blocking means, such as a rupture disk, which is designed to rupture upon a predetermined hydraulic pressure.¹⁰ It cannot be construed as a shear as claimed in the present application.

Yet further, the Office Action alleges that the Leismer patent discloses a control line passageway comprising a recess 62. Applicants respectfully traverse this allegation as being contrary to fact. The recess 62 is a latching recess, not a control line passageway as claimed in the present application.

⁸ See column 4, lines 25-26, of the Leismer patent.

⁹ See column 4, line 40, of the Leismer patent.

¹⁰ See column 3, lines 50-53, of the Leismer patent.

Accordingly, it is respectfully requested that the rejection of claims 1-13 and 21-30 under 35 U.S.C. § 102(b), as being anticipated by the Leismer patent, be reconsidered and withdrawn.

Rejection of claims 1-5, 8-12, 21-25, and 28 over US 4,660,635

The rejection of claims 1-5, 8-12, 21-25, and 28 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,660,635 to Wittrisch (hereinafter referred to as "the Wittrisch '635 patent"), is respectfully traversed for the reasons set forth below.

Claim 1, as amended, requires a control line shear mechanism disposed proximate an interface between the first member and the second member. The Wittrisch '635 patent discloses a sliding sleeve 8 having a beveled section 12 that interacts with a member 5 to cut a cable 3. However, the shear mechanism (*i.e.*, the interface between the beveled section 12 and the member 5) is not disposed proximate an interface between a sub 1 and a member 1a or between the sub 1 and a member 1b. Accordingly, the Wittrisch '635 patent does not anticipate the present invention as set forth in claim 1.

The Wittrisch '936 patent provides no suggestion or motivation for one skilled in the art of the invention to modify the Wittrisch '936 patent such that the interface between the beveled section 12 and the member 5 is proximate the interface between the sub 1 and the member 1a or between the sub 1 and the member 1b. Accordingly, the present invention, as set forth in claim 1, is allowable over the Wittrisch patent.

Claims 2-5 and 8-11 depend from claim 1. Accordingly, the remarks provided *supra* concerning claim 1 apply equally to claims 2-5 and 8-11.

Claim 12, as amended, requires a control line shear mechanism disposed proximate an interface between a first member and a second member. As discussed

supra concerning claim 1, the Wittrisch '936 patent does not disclose or suggest such a configuration. Accordingly, the present invention, as set forth in claim 12, is allowable over the Wittrisch '936 patent.

Claim 21 requires cutting a control line proximal to the point of separation of the first and second members before or during the separation step. The Wittrisch '936 patent does not disclose or suggest that the interfaces between the sub 1 and the members 1a and 1b are points of separation. However, even if they are considered to be points of separation, which they are not so disclosed, the Wittrisch '936 patent still fails to disclose or suggest that the cable 3 is cut proximal to the point of separation. Further, the Wittrisch '936 patent does not disclose or suggest even the desirability of cutting the cable 3 at such a location. Rather, it discloses that it is quite suitable to cut the cable above the interface between the sub 1 and the member 1b, such that the cable 3 falls back inside the member 1b.¹¹ Accordingly, the present invention, as set forth in claim 21, is allowable over the Wittrisch '936 patent.

Claims 22-25 depend from claim 21. Accordingly, the remarks provided *supra* concerning claim 21 apply equally to claims 22-25.

Claim 28, as amended, requires providing a tubular string comprising a safety sub, the safety sub having a point of separation and comprising a control line cutting mechanism disposed proximate the point of separation of the safety sub. Firstly, the sub 1 of the Wittrisch '936 patent is not a safety sub. Rather, it is merely a side entry sub. The Wittrisch '936 patent does not disclose or suggest that a safety sub would be desirable in the disclosed configuration. Secondly, the Wittrisch '936 patent does not disclose or suggest a control line cutting mechanism disposed proximate the point of

separation, as discussed *supra* concerning claim 21. Accordingly, the present invention, as set forth in claim 28, is allowable over the Wittrisch '936 patent.

Accordingly, it is respectfully requested that the rejection of claims 1-5, 8-12, 21-25, and 28 under 35 U.S.C. § 102(b), as being anticipated by the Wittrisch '936 patent, be reconsidered and withdrawn.

Rejection of claims 1-5, 8-16, 21-25, and 28 over US 4,738,312

The rejection of claims 1-5, 8-12, 21-25, and 28 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,738,312 to Wittrisch (hereinafter referred to as "the Wittrisch '312 patent"), is respectfully traversed for the reasons set forth below.

Claim 1, as amended, requires a control line shear mechanism disposed proximate an interface between the first member and the second member. The Wittrisch '312 patent discloses an arm 16 that is used to cut the cable 2 disposed between the interface between the sub 1 and the tubular element 1a and the interface between the sub 1 and the tubular element 1b. Thus, the arm 16 is not disposed proximate an interface between a first member and a second member, as required by claim 1. Further, the Wittrisch '312 patent does not disclose or suggest that having the arm 16 proximate the interfaces between the sub 1 and either of the tubular elements 1a, 1b would be appropriate or even desirable. Accordingly, the present invention, as set forth in claim 1, is allowable over the Wittrisch '312 patent.

Claims 2-5 and 8-11 depend from claim 1. Accordingly, the remarks provided *supra* concerning claim 1 apply equally to claims 2-5 and 8-11.

¹¹ See column 4, lines 1-5, of the Wittrisch '936 patent.

Claim 12, as amended, requires a control line shear mechanism disposed proximate an interface between a first member and a second member. As discussed *supra* concerning claim 1, the Wittrisch '312 patent does not disclose or suggest such a configuration. Accordingly, the present invention, as set forth in claim 12, is allowable over the Wittrisch '312 patent.

Claim 13 requires first and second members defining a control line passageway that comprises a pair of shearing blades adapted to shear a control line during release. The Wittrisch '312 patent does not disclose or suggest that the sub 1 is released from either of the members 1a or 1b, either while the cable 2 is being cut or afterward. Further, the Wittrisch '312 patent does not even disclose the desirability of such a configuration. Yet further, the passageway through which the cable 2 passes does not comprise a pair of shearing members. Rather, the arm 16 rotates within the passageway. The Wittrisch '312 patent does not disclose that such a configuration would be possible or even desirable. In fact, if the arm 16 were to be part of the passageway, it would not be able to rotate, thus rendering the device of the Wittrisch '312 patent inoperable. Accordingly, the present invention, as set forth in claim 13, is allowable over the Wittrisch '312 patent.

Claims 14-16 depend from claim 13. Accordingly, the remarks provided *supra* concerning claim 13 apply equally to claims 14-16.

Claim 21 requires cutting a control line proximal to the point of separation of the first and second members before or during the separation step. The Wittrisch '312 patent does not disclose or suggest that the interfaces between the sub 1 and the members 1a and 1b are points of separation. However, even if they are considered to be points of separation, which they are not so disclosed, the Wittrisch '312 patent still fails to

disclose or suggest that the cable 2 is cut proximal to the point of separation. Further, the Wittrisch '312 patent does not disclose or suggest even the desirability of cutting the cable 2 at such a location. Accordingly, the present invention, as set forth in claim 21, is allowable over the Wittrisch '312 patent.

Claims 22-25 depend from claim 21. Accordingly, the remarks provided *supra* concerning claim 21 apply equally to claims 22-25.

Claim 28, as amended, requires providing a tubular string comprising a safety sub, the safety sub having a point of separation and comprising a control line cutting mechanism disposed proximate the point of separation of the safety sub. The Wittrisch '312 patent does not disclose or suggest a control line cutting mechanism disposed proximate the point of separation, as discussed *supra* concerning claim 21. The Wittrisch '312 patent discloses a safety sub 1e; however, the arm 16 is not part of the safety sub 1e (as required by claim 28), but is part of the sub 1. The Wittrisch '312 patent does not disclose or suggest that including the arm 16 in the safety sub 1e would either be possible or desirable. Accordingly, the present invention, as set forth in claim 28, is allowable over the Wittrisch '312 patent.

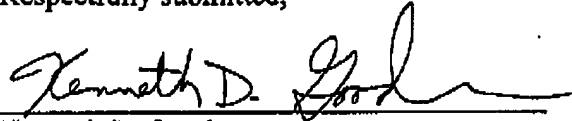
Accordingly, it is respectfully requested that the rejection of claims 1-5, 8-12, 21-25, and 28 under 35 U.S.C. § 102(b), as being anticipated by the Wittrisch '312 patent, be reconsidered and withdrawn.

CONCLUSION

Attached hereto is an appendix including a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to contact Daren C. Davis at (817) 578-8616 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



Date: October 31, 2002



23720

PATENT TRADEMARK OFFICE

Kenneth D. Goodman
Reg. No. 30,460
WILLIAMS, MORGAN & AMERSON
7676 Hillmont, Suite 250
Houston, Texas 77040
(713) 934-4094
(713) 934-7011 (facsimile)

ATTORNEY FOR APPLICANTS

APPENDIX**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

The following is a marked-up version of the changes to the specification and claims that are being made in the attached response to the Office Action dated August 1, 2002.

IN THE SPECIFICATION:

The paragraph beginning at page 9, line 17, and ending at page 10, line 2, has been amended as follows:

Likewise, although the previous embodiments show an extensive passageway, the cutting mechanism could simply be a pair of blades (42, 44) through which the control line 2 is run as shown in Figure 6. The blades (42, 44) act to cut the control line 2 as the first member 16 and second member 20 separate from one another. Further, the cutting device could be independent of the motion of the first and second members (16, 20). For example, as shown in Figure 7, the cutting device can comprise a solenoid 46 driven cutter 48 that cuts the control line 2 regardless of the motion of the other safety sub components. The solenoid could be replaced by a hydraulic cylinder or some other drive mechanism. Some embodiments of the invention are independent of the means by which the tubing is parted, and therefore can be used if means, other than those described herein, are used to part the tubing.

The paragraph beginning at page 18, line 3, and ending at page 18, line 7, has been amended as follows:

[The present invention discloses apparatus and methods that can be used to sever a control line. One embodiment of the invention is a shear sub comprising a first member and a second member that are releasably attached to each other. The first and second members define a control line passageway. The control line passageway comprises a pair of shearing blades that are adapted to shear a control line during release of the first member from the second member.]

An apparatus includes a first member, a second member releasably attached to the first member, and a control line shear mechanism disposed proximate an interface between the first member and the second member. The first and second members can each have a longitudinal bore therethrough and can be moveable in an axial direction to release from one another. The control line shear mechanism may comprise a first shear member attached to the first member and a second shear member attached to the second member, wherein the first and second shear members are adapted to cooperatively shear a control line as the first and second members separate. A method includes separating a first member from a second member and, before or during the separating step, cutting a control line proximal to the point of separation of the first and second members.

IN THE CLAIMS:

Claims 1, 12, and 28 have been amended as follows:

1. (Once Amended) An apparatus, comprising:

a first member;

a second member releasably attached to the first member; and

a control line shear [mechanism.] mechanism disposed proximate an interface between the first member and the second member.

12. (Once Amended) An apparatus, comprising:

a first tubular member;
a second tubular member releasably attached to the first tubular member;
the first and second tubular members are moveable in an axial direction to release from one another;

a control line shear [mechanism] mechanism, disposed proximate an interface between the first member and the second member, comprising a first and second control line shear member;

the first control line shear member being attached to the first tubular member;
the second control line shear member being attached to the second tubular member; and
the first and second control line shear members are adapted to cooperatively shear a control line as the first and second tubular members separate.

28. (Once Amended) A method of completing a well comprising:

providing a tubular string comprising a safety sub, the safety sub including a point of separation and comprising a control line cutting mechanism;

attaching a control line to the tubular string, the control line being disposed through the control line cutting mechanism; and

inserting the tubular string and control line into the well.